Public Works (1897) Department.

G.O., No. 250 I.

DATED 11 March 1897

17/3/97

[Despatch Abstract.]

Tank: Estimate of Rs. 16,900 for forming a new — near Payidipalem, Cuddapah D^n, sanctioned under "33. Famine Relief."

110/8

[P.W. 38. 1,500—89—11-96]

TC 20/3/97

Indexed.

17/3/97

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

IRRIGATION.
ACCOUNT.

Government {1897} of Madras.

PUBLIC WORKS.

Recd. } 1897. *Enclosures*

Regd. *Spare copies*

G.O., No. 250 I., 11th March 1897.

MARCH.

Tank

Estimate of Rs. 16,900 for forming a new — near Payidipaliem, Cuddapah division, sanctioned under "33. Famine Relief."

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

Read—the following paper :—

Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 15th February 1897, Mis. No. 1175.

Read—the following letter from the Superintending Engineer, III Circle, Bellary, to the Collector of Cuddapah, dated 4th February 1897, No. 3702 :—

With reference to your letter, Reference No. 6810/Rev. of 1896, dated 23rd December 1896, I have the honour to forward, herewith, plans and estimates, amounting to Rs. 18,860, for forming a new tank near Payidipaliem, in Pulivendla taluk, Cuddapah district, and request that you will be good enough to countersign the same and transmit them to the Chief Engineer for Irrigation, for sanction. This is one of the famine works proposed in the Cuddapah district.

Enclosure.

Report to accompany an estimate for forming a new tank near Payidipaliem, in the Pulivendla taluk, Cuddapah district.

	RS.
Amount of estimate	16,900

General description.—Payidipaliem is the most northerly village in the Pulivendla taluk and is situated a little to the east of Lavanur tank and at the foot of the Palkonda hills. Two streams from these hills flow close past the village, the one to the north being the principal feeder of Lavanur tank, and the one on the south going direct to the Chitravati river without being utilized in any way. The tank now proposed will be formed by damming up the latter of these two streams, which is known as the "Chintalapaya vunkah."

This proposal is not a new one, and a little way above the site now selected, there are the remains of an old bund. The reddi of Payidipaliem states that this tank was constructed by one of his ancestors and that it breached more than 100 years ago. The new tank will be a far larger one than the old one and is better situated, as half the surplus water from Lavanur tank will flow into it.

Situation.—The proposed tank bund will start from the Lavanur tank bund about 1,360 feet from its left end, and will run in a southerly direction across the Chintalapaya vunkah just below where the surplus channel from the left escape of the Lavanur tank joins the vunkah. The bund will then be carried on to the high ground and end near a large gravel mound between Payidipaliem and Chavanapalle villages. The total length of the bund will be 3,796 feet.

The surplus arrangements of the tank will consist of an escape at the left flank, where the ground level is suitable.

The proposed ayacut (as shown below) is 200 acres, and for this area two sluices—one on each side of Chintalapaya vunkah, will be provided.

A small sluice is also allowed for near the left flank, for the irrigation of a few acres of high land which are at present irrigated from a small kunta, but this kunta will have its supply intercepted when the new tank is constructed.

Supply and Ayacut.—The drainage area of Chintalapaya vunkah at the site of the proposed tank is 3·1 square miles. The new tank will also receive half of the surplus of Lavanur tank. This tank has a catchment area of 6·70 square miles and has two escapes of about the same length —one at each flank. The surplus water from the left flank escape will flow into the new tank.

Lavanur tank is very much silted up, the sill of its sluice being more than 10 feet below present tank bed level; the capacity of the tank is consequently very much reduced and it surpluses almost every year. It will therefore be not too sanguine an estimate to assume that one-quarter of the supply to Lavanur tank will find its way into the Payidipaliem tank, or in other words, 1 70 square mile of the catchment area of Lavanur tank belongs to the proposed tank. This will give a total catchment area of 4·80 square miles.

Chintalapaya vunkah brings down a very good supply, and continues to flow for months after rain has stopped (the present is a very bad year, but it is still flowing slightly); so an ayacut of 50 acres per mile of catchment basin is not too high a figure to take. On this assumption the ayacut of the tank will be taken to be 200 acres. This area (and far more) is available just below the tank bund.

Capacity.—The waterspread of the tank at the F.T.L. proposed is 7,697,000 square feet and the depth of water on the sill of the low level sluice is 16 feet.

Assuming the average depth of the tank to be one-third of this, the capacity will be $\frac{16}{3}$ × 7,697,000 = 41 millions of cubic feet, and allowing 216,000 cubic feet per acre, this will be sufficient for almost 200 acres. Bearing in mind the fact that the Chintalapaya vunkah flows for some months, it may be taken that the capacity of the tank is quite sufficient for 200 acres.

Land Compensation.—The greater part of the waterspread of the tank is waste land, but there is a certain area of cultivated land, compensation for which has been allowed in the estimate.

Surplus arrangements.—The maximum drainage discharge into the tank will be the discharge from Chintalapaya vunkah (3 1 square miles) + half the discharge from Lavanur tank (6·7 square miles).

Assuming C	= 350
The maximum discharge from the free catchment area.	$D = 350 \times 3{\cdot}10^{\frac{3}{4}}$
	= 350 × 2·34.
	= 819 cubic feet per second.
Half the discharge from Lavanur tank.	= 728 cubic feet per second (seehydraulic details).
∴ Total discharge	= 1,547 cubic feet per second.

The length of weir required for this discharge, assuming 2 feet of water passing over it, would be—

$$l = \frac{1547}{3{\cdot}25 \times 2{\cdot}8} = 168 \text{ feet.}$$

∴ The proper length of flush escape would be 168 × $\frac{3}{2}$ = *252 feet*, and this is the length allowed.

Prospects.—The financial prospects of the work are not very promising. If an ayacut of 200 acres be conceded, the increase of revenue will probably be Rs. 1,000. This, on an outlay of Rs. 18,860, represents about 5·3, which would not be so bad *if* it were certain, but this is a very big "if".

The estimate has, however, been prepared chiefly as a famine-relief work and as such it is submitted for sanction.

The new tank should be called "Payidipaliem tank."

(Signed) S. B. MURRAY,
Executive Engineer.

19th January 1897.

Endorsement thereon from the Collector of Cuddapah, dated 8th February 1897, Ref. on C. No. 63/Tour.

Forwarded to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, Madras, for sanction.

Resolution—dated 15th February 1897, Mis. No. 1175.

Forwarded to the Chief Engineer for Irrigation for sanction.

(True Copy and Extract.)

(Signed) R. V. SRINIVASIAR,
Secretary.

No. 50 I.

Submitted to Government with a recommendation that the estimate, as reduced in this office from Rs. 18,860 to Rs. 16,900, be sanctioned under "33. Famine Relief." The reduction of Rs. 1,960 is due to the omission of the proposed revetment from escape to cross section No. 3 and from cross section No. 18 to cross section No. 24.

1st March 1897.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

Order—No. 250 I., dated 11th March 1897.

The following estimate is sanctioned:—

Irrigation.
33. Famine Relief.
Minor Works for which neither Capital nor Revenue Accounts are kept, P.W.D.
Original Works.
Cuddapah Division.
Forming a new tank near Payidipaliem.

	RS.
Estimate	16,900

2. This sanction is registered as No. 199 I. of 1896–97.

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, III Circle, with eleven enclosures.
" Examiner, Public Works Accounts.

Exd. T. K. Narayana Aiyangar.

Formation of a new tank near Payirpalaiam

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH.

H.E. No 250 I of (11-3-97)

Public Works (1897) Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Govt Act Current No: 2553

UNDER date the

Recd: 10.3.97

READ the following

Enclos: 13 + (4 Plans)

Print with Report

Procs / Board of Revenue, Rev Sett: L.R & Agri:

No. 1175 Mis. of 15 Feb 97

No 50 I of 1-3-97

Submitted to Govt with a recommendation that the estimate as reduced in this office from Rs 1,8860 to Rs 16,900 be sanctioned under "33. Famine Relief." The reduction of Rs 1,960 is due to the omission of the proposed revetment from escape to cross section No. 3 & from cross section No. 18 to cross section No. 24.

Order thereon

The following

C.P.

I.H.

W.H.

I 10/3/97

[illegible] 9/3/97

Estimate is sanctioned:—

Irrigation

33. Famine Relief

Minor Works for which neither Capital nor Rev^e. Accounts are kept, I.W.D.

Original Works.

Cuddapah Div^n.

Forming a new tank near Payidipalem.

Estimate Rs 16,900.

2. This sanction is registered as No. 199 I of 1896-97.

[illegible] 27/2/97

W.H. 1-3-97

A.S.H. 6.3.97

[illegible] 8/3

F.E.G. 11/3/97

To The Chief Eng^r for Irrigation
Supt^g Eng^r III Circle in [illegible] with 11 enclos.
Ex I.W.D.

[illegible] 17/3.

[illegible] 12/3/97

NCB 26/3/97

P.W. Form No. 1—1,000—2-2-97.

H.E.S.3.26.93

25.P

Report to accompany an estimate for forming a new tank near Payidipalem in the Pulivendla Taluk Cuddapah District.

COLLECTOR'S OFFICE
-6 FEB 1897
CUDDAPAH

16,900

Amount of Estimate Rs ~~16,600.~~

General description.

Payidipalem is the most northerly village in the Pulivendla Taluk and is situated a little to the east of Lavanur tank and at the foot of the Palkonda Hills. Two streams from these hills flow close past the village, the one to the north being the principal feeder of Lavanur tank, and the one on the south going direct to the Chitravati River without being utilized in any way. The tank now proposed will be formed by damming up the latter of these 2 streams, which is known as the "Chintalapaya Vunkah".

This proposal is not a new one, and a little way above the site now selected there are the remains of an old bund. The Reddi of Payidipalem

States that this tank was constructed by one of his ancestors & that it breached more than 100 years ago. The new tank will be a far larger one than the old one & is better situated, as half the surplus water from Lavanur tank will flow into it.

Situation

The proposed tank bund will start from the Lavanur tank bund about 1360 feet from its left end, and will run in a southerly direction across the Chenlāla-paya Vunkah just below where the surplus channel from the left escape of the Lavanur tank joins the vunkah. The bund will then be carried on to the high ground and end near a large gravel mound between Payedipalem & Chawanapalle villages. The total length of the bund will be 3796 feet.

The surplus arrangements of the tank will consist of a ~~byewash~~ an at

Escape

~~3 S.P~~ the left flank, where the ground level is suitable.

3 S.P

The proposed ayacut (as shown below) is 200 acres, & for this area 2 Sluices, one on each side of Chintalapaya vankah, will be provided.

A small sluice is also allowed for near the left flank, for the irrigation of a few acres of high land which are at present irrigated from a small kunta, but this kunta will have its supply intercepted when the new tank is constructed.

Supply & Ayacut. The drainage area of Chintalapaya vunkah at the site of the proposed tank is 3.1 Sqr miles. The new tank will also receive half of the surplus of Lavanur tank. This tank has a catchment area of 6.70 Sqr miles & has 2 escapes of about the same length, one at each flank. The surplus water from the left flank escape will flow into

the

the new tank. Lavanur tank is very much silted up, the sill of its sluice being more than 10 feet below present tank bed level, the capacity of the tank is consequently very much reduced and it surplusses almost every year. It will therefore be not too sanguine an estimate to assume that 1/4 of the supply to Lavanur tank will find its way into the Payedipalem tank, or in other words 1.70 Sqr miles of the catchment area of Lavanur tank belongs to the proposed tank. This will give a total catchment area of 4.80 Sqr miles.

Chintalapaya Vunkah brings down a very good supply, & continues to flow for months after rain has stopped, (The present is a very bad year, but it is still flowing slightly) so an ayacut of 50 acres per mile of catchment basin is not too high a figure to take.

45.p. On this assumption the ayacut of the tank will be taken to be 200 acres. This area (and far more) is available just below the tank bund.

Capacity. The water spread of the tank at the F T L proposed is 7,697,000 cft & the depth of water on the sill of the low level sluice is 16 feet.

Assuming the average depth of the tank to be 1/3 of this, the capacity will be $\frac{16}{3} \times 7,697,000 = 41$ millions of Cft, & allowing 216,000 cft per acre, this will be sufficient for almost 200 acres. Bearing in mind the fact that the Chintalapaya Vankah flows for some months. It may be taken that the capacity of the tank is quite sufficient for 200 acres.

Land Compensation. The greater part of the waterspread of the tank is waste land, but there is a certain area of cultivated land, compensation for which has been allowed in the estimate.

Surplus arrangements. The maximum drainage

discharge into the tank will be the discharge from Chintalapaya Vunkah (3.1 Sqr miles) + half the discharge from Lavanur tank (6.7 Sqr miles).

Assuming C = 350

The maximum discharge from the free catchment area } $D = 350 \times 3.1^{\frac{3}{4}}$

$= 350 \times 2.34$

= 819 cft per second.

Half the discharge from Lavanur Tank = 728 cft per second.

(see hydraulic details)

∴ total discharge = 1547 cft per second.

The length of weir required for this discharge, assuming 2 ft of water passing over it, would be

$$l = \frac{1547}{3.25 \times 2.8} = 168 \text{ feet.}$$

∴ the proper length of flush escape would be $168 \times \frac{3}{2}$ = ~~253~~ 252 ft. and this is the length allowed.

Prospects - 5.S.B. The financial prospects of the work are not very promising. If an ayacut of 200 acres be conceded the increase of revenue will probably be Rs 1000/. - This, on an outlay of Rs ~~10,000~~ 18,860 [illegible], represents about ~~6~~ 5.3 %, which would not be so bad if it were certain, but this is a very big "if" -

[illegible] A.4.H

The estimate has however been prepared chiefly as a famine Relief work & as such it is submitted for sanction.

The new tank should be called "Payidipalem tank".

S. [illegible]
15.1.97
Executive Engineer

[illegible]

FOR [illegible]
[illegible]
No. 934

5—

P.W. E.5 / 2553/97

Public Works (1897) Department.

Receipt ~~CURRENT~~ No. 93 M

Order

From Board of Rev. Rev Settt Land Records & Agri:

No. 1175 Mis:

Dated 15 February 1897

Received

Enclosures 13

Spare copies

SUBJECT.

Minor Irrigation Works Cuddapah Dt. Forwarding Estimates of a certain — to the Chief Engineer for Irrigation for sanction.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

(Sett. 22–2,000–29-10-96.

18

REVENUE BOARD OFFICE. MADRAS.

Proceedings of the Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

Dated 15" February 1897.

No. 1175 Mis:

READ The following letter from the Superintending Engineer, ~~III~~ Circle Bellary, to the Collector of ~~Bellary~~ Cuddapah dated 4" February 1897, No: 3702:–

Enclosures 13
1 Report
1 Hydraulic statement
2 – do earthwork calculation sheets.
1 – do Sectional area & contents.
1 – Calculation sheet of revetment
1 – do estimate
1 – Data
1 Abstract estimate
1 Tracing group map
1 – do survey
2 – do Sections of bund.
13

With reference to your letter Reference No: 6810/Rev. of 1896 dated 23rd. December 1896, I have the honour to forward herewith plans and estimates amounting to Rs 18,860 for forming a new tank near Payidipaliem in Pulivendla Taluk, Cuddapah District and request that you will be good enough to ~~consider~~ counter-sign the same and transmit them to the Chief Engineer for Irrigation for sanction. This is one of the Famine works proposed in the Cuddapah District.

Endorsement thereon from the Collector of Cuddapah, dated 8" February 1897, Reference on C No: 63/ Tour:-

Forwarded to the Secretary to the Commissioners of Revenue Settlement and Director of the Department of Land Records and Agriculture, Madras, for sanction.

Resolution.

Forwarded to the Chief Engineer for Irrigation for sanction.

(True Copy and Extract)

R. V. Srinivasa [signature]
Secretary.

To.

The Chief Engineer for Irrigation

with the plan and estimate.

C.E.I.
20-2-97

1897

Board of Revenue
(Rev Sett. L. R. & Agri.)

Madras

[Chief] Engineer
FOR IRRIGATION.
[19] FEB. 97
No. 93 Ms

To

The Chief Engineer
for Irrigation.

Famine Work

Urgent

Progs: of 15th February 1897
No. 1175 Mis:

Subject

Forwarding estimate &c
of a certain Minor Irrigation
Work, Cuddapah District
to the Chief Engineer for
Irrigation for sanction.

P.W. E-13
2550/97

To D.E.I for orders if
the estimate may be
sanctioned after check

[initials]
16-2-97